

## ABSTRACT

[1171] Techniques to process data for transmission over multiple transmission channels. The available transmission channels are segregated into one or more groups, and the channels in each group are selected for use for data transmission. Data for each group is coded and modulated based on a particular coding and modulation scheme to provide modulation symbols, and the modulation symbols for each selected channel are weighted based on an assigned weight. The weighting “inverts” the selected channels such that they achieve similar received SNRs. With selective channel inversion, only “good” channels in each group having SNRs at or above a particular threshold are selected, “bad” channels are not used, and the total available transmit power for the group is distributed across the good channels in the group. Improved performance is achieved by using only good channels in each group and matching each selected channel’s received SNR to the required SNR.